



VIRGINIA ANNUAL RECYCLING SUMMARY REPORT

CALENDAR YEAR 2019

JANUARY 2021

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Virginia's State Recycling Summary Report for Calendar Year 2019

Executive Summary

The calendar year 2019 Annual Recycling Rate reporting by Virginia Solid Waste Planning Units (SWPUs) with populations above 100,000¹ established a calculated recycling rate for Virginia of 43.2%. This calculation included credits for solid waste reused, non-municipal solid waste (MSW) recycled, recycling residues, and source reduction programs. This rate was based on the data submitted by the 17 SWPUs required to report for 2019.

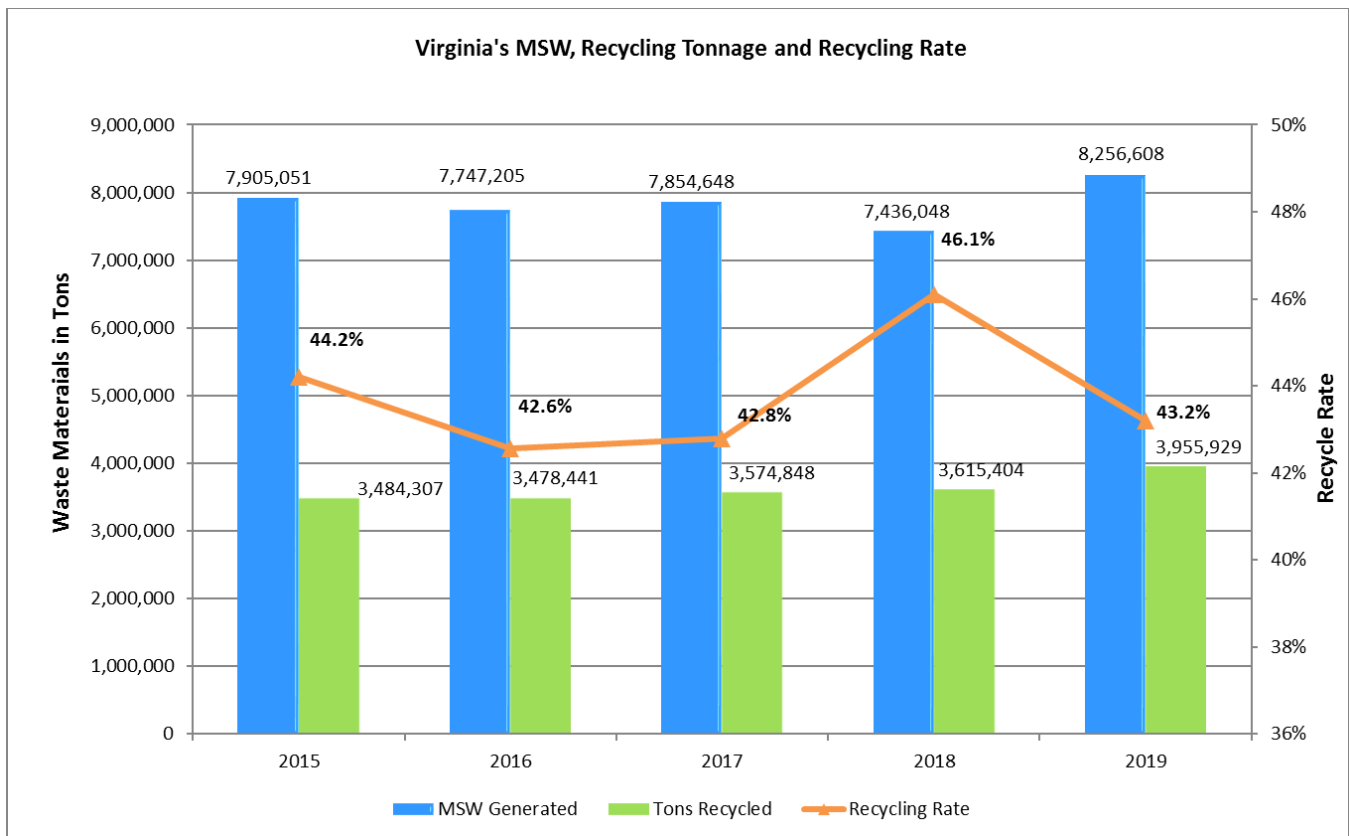
Based on information provided by the localities, the CY2019 recycling rate decreased due to recycling challenges faced by the industry and because of the difficulty obtaining recycling information from private businesses due to the COVID 19 pandemic.

Introduction

The Virginia Department of Environmental Quality (DEQ) has completed its review of the recycling rate data reported for calendar year 2019. DEQ has reviewed 42 submitted reports. Of the 42 submitted reports, 25 were submitted by SWPUs not required to report during the 2019 reporting cycle. The data on these reports represent recycling information from 117 Virginia cities, counties and towns.¹

Virginia's annual recycling rate for 2019 as seen on the graph below is based only on data from the required reports submitted by the 17 SWPUs with populations above 100,000.

¹ Virginia Code §10.1-1411 was amended by legislation introduced during the 2012 Session of the Virginia General Assembly and requires annual recycling rate reporting by each SWPU or locality with a population of greater than 100,000 according to the most recent U.S. Census. Each SWPU or locality with a population of 100,000 or less according to the most recent U.S. Census must submit a recycling survey report once every four years. Planning units in this latter category will next report in 2021 for calendar year 2020.



Based on these reports, the state recycling rate is 43.2%, a decrease from the CY2018 report. The 17 SWPUs reported recycling 2,656,006 tons of principal recyclable materials (PRMs), 1,299,923 tons of credits (includes recycling residue, reused solid waste, and non-MSW recycled) and disposal of 4,300,678 tons of MSW.

Mandated Recycling Rates

Pursuant to Virginia Code §10.1-1411.D, each SWPU is required to achieve and maintain a minimum 25 percent annual recycling rate *unless*:

- Its population density is less than 100 persons per square mile, *or*
- Its civilian unemployment rate is 50 percent or more above the state unemployment average.

SWPUs that meet the criteria above are required to achieve and maintain a minimum 15 percent recycling rate. All 17 SWPUs required to report, met or exceeded their mandated recycling rate.

Solid Waste Management Planning and Recycling Action Plans

The Virginia Department of Environmental Quality (DEQ) continues to review the required solid waste management plans and any updates submitted by the SWPUs for completeness, including locality or regional recycling program information. All SWPUs are required to maintain or exceed the mandated recycling rate for their jurisdiction(s). If at any time the SWPU reports less than the required 15 percent or 25 percent recycling rate, DEQ will require that a Recycling Action Plan be developed and submitted as an amendment to the SWPU's solid waste management plan. Visit [DEQ's recycling webpage](#) for additional information.

State Recycling Rate Calculation for CY2019

Seventeen recycling rate reports, representing 117 Virginia localities, were received pursuant to the requirements of § 10.1-1411 of the Code of Virginia. The chart represents data only from the 17 SWPUs required to report for CY 2019. This represents a return rate of 100 percent of the required reports. Totals for these reports are presented below:

PRM Material	Tons Recycled	Credits	Tons Recycled
Paper	666,356	Recycling Residue	572,434
Metal	726,454	Solid Waste Reused	15,262
Plastic	15,405	Non-MSW Recycled	712,227
Glass	18,327	Total Credits	1,299,923
Commingled	370,244		
Yard Waste	542,158	MSW Disposed	Tons
Waste Wood	130,131	Household Waste	2,971,421
Textiles	29,689	Commercial Waste	1,115,768
Waste Tires	38,228	Institutional Waste	210,859
Used Oil	35,691	Other	2,630
Used Oil Filters	1,266	Total MSW Tons	4,300,678
Used Antifreeze	2,830		
Batteries	8,645	Source Reduction Credit Total	0.94%
Electronics	6,830		
Inoperative Motor Vehicles	2,430		
Other	61,323		
Total PRM in Tons	2,656,006		

State Final Recycling Rate Calculation:

The recycling rate is calculated using the following formula:

$$\left(\frac{\text{PRM} + \text{Credits}}{\text{PRM} + \text{Credits} + \text{MSW Disposed}} \right) \times 100 + \text{Source Reduction Credit} = \text{Final Recycle Rate}$$

Using the PRMs, credits and MSW disposed tonnage totals above, the state recycling rate is calculated as:

$$\left(\frac{2,656,006 + 1,299,923}{2,656,006 + 1,299,923 + 4,300,678} \right) \times 100 + 0.94\% = \mathbf{43.2\%} *$$

*The final state recycling rate has been adjusted so that the aggregate of all credits does not exceed five percentage points of the base recycling rate.

Calculated Recycling Rates for CY2019

REPORTING ENTITY (17 Solid Waste Planning Units required to report annually)	2019 Recycling Rate	2019 Total Recycled Tons (PRMs + Credits)	2019 Total MSW Generation Tons (PRMs + Credits + MSW disposed)
Alexandria (City) SWPU	48.8%	102,846	182,879
Arlington County SWPU	50.8%	140,946	240,520
Augusta-Staunton-Waynesboro SWPU	32.4%	43,566	143,329
Central Virginia Waste Management Authority SWPU (Counties of Charles City, Chesterfield, Goochland, Hanover, Henrico, New Kent, Powhatan and Prince George; Cities of Richmond, Hopewell, Colonial Heights and Petersburg)	59.1%	617,011	1,043,430
Fairfax County SWPU	47.0%	656,680	1,240,935
Loudoun County SWPU	33.0%	147,946	447,815
Montgomery Regional Solid Waste Authority SWPU (Montgomery County, Towns of Blacksburg and Christiansburg)	40.3%	39,625	98,356
Mount Rogers PDC SWPU (Counties of Bland, Smyth, Washington and Wythe)	21.0%	15,973	75,906
Newport News (City) SWPU	52.8%	232,219	378,180
Northern Shenandoah Valley Regional Commission SWPU (Counties of Clarke, Frederick, Shenandoah, Warren and Page; City of Winchester)	44.1%	129,340	293,492
Prince William County SWPU	38.2%	296,527	594,188
Rappahannock Regional Solid Waste Management Board SWPU (Stafford County and City of Fredericksburg)	33.9%	71,873	214,776
Region 2000 (Counties of Nelson, Appomattox and Campbell; City of Lynchburg)	43.6%	116,733	267,826
Southeastern Public Service Authority SWPU (Counties of Isle of Wight and Southampton; Cities of Chesapeake, Franklin, Norfolk, Portsmouth, Suffolk and Virginia Beach)	35.9%	1,023,799	2,051,720
Spotsylvania County SWPU	40.2%	70,991	185,828
Thomas Jefferson PDC SWPU (Counties of Albemarle, Fluvanna and Greene; City of Charlottesville)	33.8%	131,793	414,421
Virginia Peninsulas Public Service Authority SWPU (Counties of Essex, James City, King and Queen, Mathews, Middlesex and York; Cities of Hampton, Poquoson and Williamsburg)	30.8%	118,062	383,007
State Totals	43.2%	3,955,929	8,256,608

REPORTING ENTITY (25 SWPUs with populations 100,000 or less not required to report, but voluntarily reporting)	2019 Recycling Rate	2019 Total Recycled Tons (PRMs + Credits)	2019 Total MSW Generation Tons (PRMs + Credits + MSW disposed)
Bedford County SWPU (Bedford County and Town of Bedford)	40.5%	35,363	91,936
Botetourt County SWPU	15.8%	2,898	18,300
Brunswick County SWPU	15.9%	2,449	15,366
Caroline County	38.9%	6,653	16,178
Carroll-Grayson-Galax SWPU	29.6%	11,451	38,653
City of Danville SWPU	37.5%	10,630	28,340
City of Fairfax SWPU	50.3%	15,356	31,776
City of Falls Church SWPU	55.2%	6,671	12,093
City of Salem SWPU	33.7%	5,867	17,412
Cumberland Plateau Regional Waste Management Authority SWPU (Buchanan, Dickenson and Russell Counties)	16.2%	9,668	59,734
Fauquier County SWPU	36.3%	27,804	76,573
Floyd County SWPU	18.4%	2,975	16,165
Franklin County SWPU	41.8%	28,283	67,714
Greater Rockingham SWPU	40.9%	51,106	131,317
Louisa County SWPU	17.2%	3,297	19,216
Northampton County SWPU	20.7%	3,291	15,924
New River Resource Authority SWPU (Counties of Pulaski and Giles; City of Radford)	50.9%	68,491	126,093
Orange County SWPU	17.3%	4,902	28,257
Patrick County SWPU	34.1%	26,840	35,869
Rappahannock County SWPU	78.0%	13,336	17,107
Rockbridge-Buena Vista-Lexington SWPU	17.4%	12,653	57,280
Tazewell County SWPU	15.2%	9,252	70,144
Town of Herndon SWPU	30.2%	8,640	28,604
Town of Vinton SWPU	59.4%	5,240	8,823
Wise County SWPU	22.1%	10,960	49,689

All data is based on adjustments by DEQ for consistency with 9VAC-20-130-125, with a 5 percent maximum percentage allowed for credits to the base recycling rate calculated by a solid waste planning unit. A 2 percent source reduction credit has been added to the calculated recycling rates for those planning units with a documented source reduction program.

PRMs (principal recyclable materials): paper, metal, plastic, glass, commingled materials, yard waste, waste wood, textiles, waste tires, used oil, used oil filters, used antifreeze, inoperative automobiles, batteries, electronics, and other.

Credits: recycling residues, solid waste reused, non-MSW recycled (includes construction and demolition material, ash and debris), and source reduction initiatives. Source reduction initiatives must be documented as SWPU policy and promoted across the SWPU.

Municipal Solid Waste (MSW) disposed: Municipal solid waste delivered to sanitary landfills or incinerators for disposal.

Solid Waste Planning Units Not Reporting for CY2019

29 SWPUs with populations of 100,000 or less and not required to report for CY2019.

1. Accomack County SWPU
2. Alleghany Highlands SWPU
3. Amelia County SWPU
4. Amherst County SWPU
5. Bath County SWPU
6. Buckingham County SWPU
7. Craig County SWPU
8. City of Bristol SWPU
9. City of Harrisonburg SWPU
10. City of Manassas SWPU
11. City of Manassas Park SWPU
12. City of Martinsville SWPU
13. City of Roanoke SWPU
14. Culpeper County SWPU
15. Gloucester County SWPU
16. Highland County SWPU
17. King George County SWPU
18. Lee County SWPU
19. Lunenburg County SWPU
20. Madison County SWMP
21. Northern Neck PDC SWPU (counties of Lancaster, Northumberland, Richmond and Westmoreland)
22. Nottoway County SWPU
23. Pittsylvania County SWPU
24. Prince Edward-Cumberland County SWPU
25. Roanoke County SWPU
26. Scott County SWPU
27. Southern Crater Region SWPU
28. Southside Regional PSA SWPU (counties of Charlotte, Halifax and Mecklenburg)
29. Town of Vienna SWPU

Recycling Success Stories and Related Report Information

The information below was provided by localities or comes from web-based resources or other data sources.

Fairfax County, Arlington County, City of Alexandria, and Prince William County:

The Purple Can Club was established by Fairfax County, Arlington County, City of Alexandria, and Prince William County in 2019, with purple glass-only bins at all recycling drop-off centers in order to improve the recyclability of glass. Glass separated at these centers is hauled to a processing plant in Fairfax County, where it is recycled into new glass bottles or crushed into gravel and sand that can be used in local public works projects. Most of the recovered glass is clean enough to be marketed directly to glass beneficiaries, who in turn supply glass cullet to manufacturers' which make bottles, glass fiberglass, and other high-end glass product manufacturers.

Crushed product is also used locally for a variety of construction applications, as well as for use as filter media and aesthetic applications. In August 2020, the City of Alexandria also distributed sandbags filled with recycled glass sand to residents and businesses in advance of Hurricane Isaias. The current participants include Arlington County, City of Alexandria, Fairfax County, Prince William County, City of Fairfax, City of Falls Church, City of Fredericksburg, Town of Herndon, Town of Vienna, Stafford County, and Loudon County. For more information, please visit <https://www.fairfaxcounty.gov/publicworks/recycling-trash/glass> and <https://www.alexandriava.gov/108530>.

Prince William County:

Prince William County, in partnership with Freestate Farms, recently expanded the Balls Ford Road Composting Facility. The Balls Ford Road Composting facility began as a yard waste composting and mulching facility in 1993. In 2011, the facility expanded to accept pre-consumer fruits and vegetables and limited amounts of soiled paper, but the recent expansion with Freestate Farm's will allow the facility to compost additional food waste using Freestate Farm's state-of-the-art equipment and processes. The new facility will now be able to process more than 80,000 tons of waste a year as compared to roughly 30,000 tons per year. This expansion food waste composting capacity will benefit the entire region and will accept food waste from grocery stores, food processors, restaurants and cafeterias typically generate larger amounts of food waste and need a way to divert this material from landfills. For more information, please visit <https://www.pwcgov.org/trashandrecycling>.

Electronics Recycling:

Although not included in the state recycling rate report, computer manufacturers are required to report to DEQ the amount of electronics recovered through their recycling networks. For calendar year 2019, they reported 1,325,567 pounds (663 tons) of electronics recovered. For more information about this program, visit [DEQ's Electronics Recycling](#) webpage.

Private Sector Reporting:

Walmart, Target, BestBuy, Save A Lot, and Kohl's provided 2019 recycling data for their Virginia stores to DEQ. This information was made available to all SWPUs on DEQ's recycling webpage for inclusion in their recycling reporting. Their reports can be found on the [DEQ Recycling Rate Report webpage](#).